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ABSTRACT

Crystals of a protein complex composed of granulocyte colony-stimulating factor (G-CSF) and the G-CSF binding region of a G-CSF receptor; and the structural coordinate of each atom determined by the crystallography procedure from these crystals. By using this structural coordinate, it is possible to identify, search, evaluate or design a G-CSF mutant which has a biological activity higher than native G-CSF or an inhibitory activity on G-CSF and is derived by substitution, deletion, insertion or chemical modification of one or more amino acid residues, an agonist which is a compound having a biological activity comparable or superior to the biological activity of G-CSF, and an antagonist which is a compound inhibiting the biological activity of G-CSF.